SNIFFING STILL COUNTS!

Authors:
Dr. Malcolm John Watson.
Clinical lecturer in Anaesthesia and CSO Research fellow
Anaesthesia & Intensive Care, Gartnavel Hospital.
Glasgow.

Dr. Sandhya Prayaga.
Clinical Research Fellow, Anaesthetics
University of Glasgow.

The use of ultrasound to guide the interscalene approach to the brachial plexus is associated with a high degree of success[1].
However it can be difficult to locate the brachial plexus nerve roots in the interscalene groove due to the lack of closely related easily identifiable structures (i.e large arteries and or veins. (Figure 1))
We describe a simple method to identify the roots in the groove using ultrasound.
It has long been known that by asking a patient to sniff forcefully and making the accessory inspiratory muscles prominent, will accentuate the interscalene groove.[2]
similarly, if the patient is asked to sniff during the ultrasound guided location of the brachial plexus, the nerves (hypoechoic nodular structures) move downwards relative to other structures.(Figure 2)
We have postulated that this downward movement was due to the compression of the nerve roots between the contracted scalenus medius and anterior muscles.
We have demonstrated this finding consistently in over one hundred ultrasound guided interscalene brachial plexus blocks and often employ this method when teaching the ultrasound guided interscalene approach to the brachial plexus.

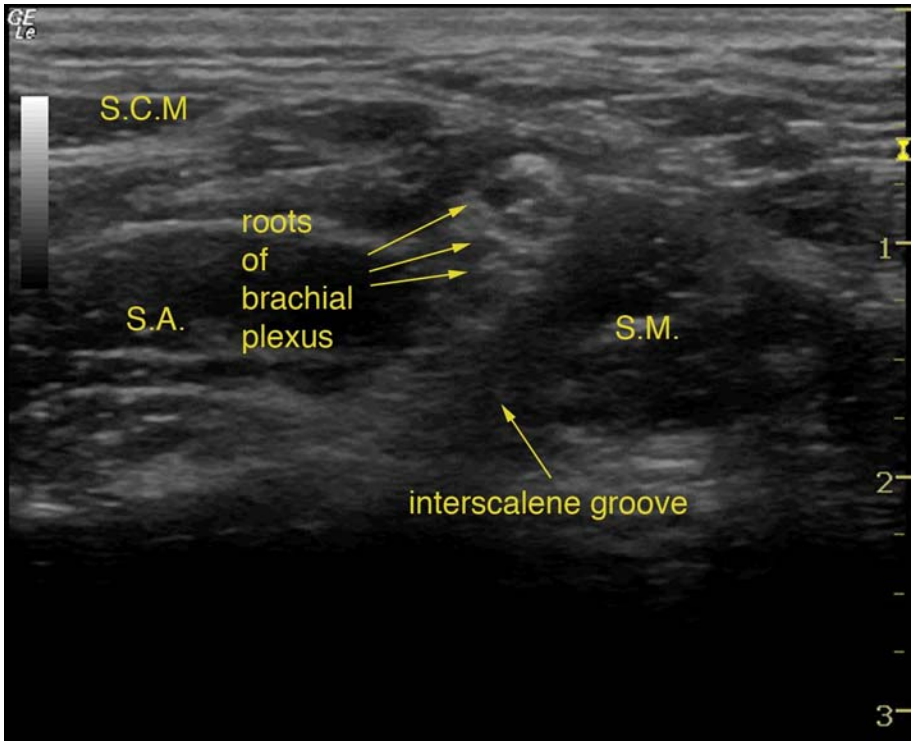

Figure 1: SCM: Sternocleidomastoid; SA: Scalenus Anterior; SM: Scalenus Medius.

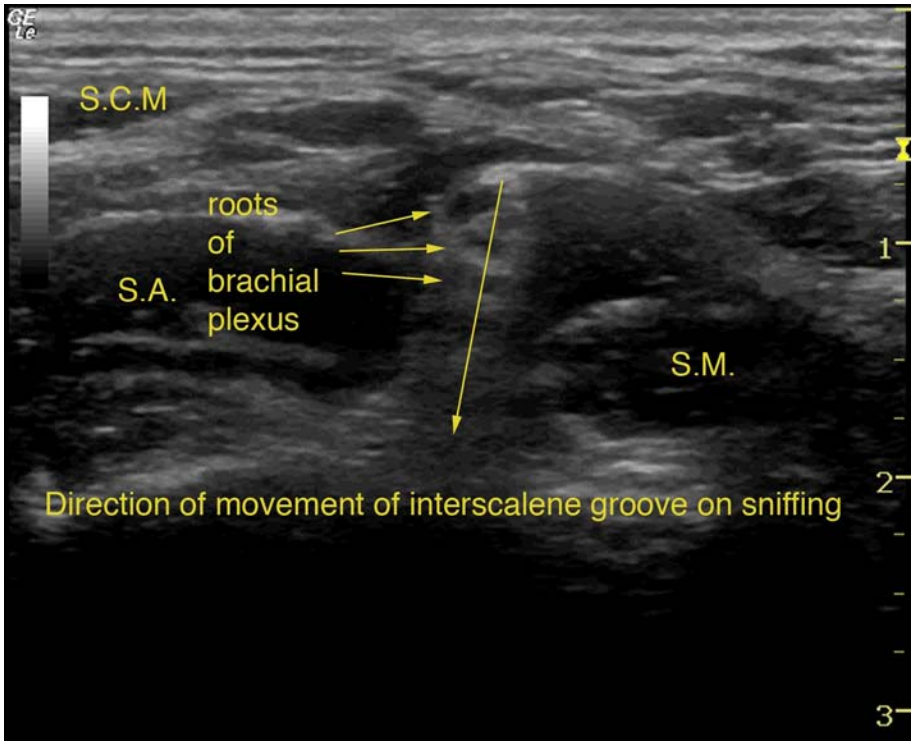

Figure 2: SCM: Sternocleidomastoid; SA: Scalenus Anterior; SM: Scalenus Medius

References:

1. van Geffen GJ. Rettig HC. Koornwinder T. Renes S. Gielen MJ. Ultrasound-guided training in the performance of brachial plexus block by the posterior approach: an observational study. [Evaluation Studies. Journal Article] Anaesthesia. 62(10):1024-8, 2007 Oct.
2. Winnie AP: Interscalene brachial plexus block. Anesth Analg; 1970; 49:455-66.